

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>BP111126</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/FI2005/000074</b>	International filing date (day/month/year) <b>04/02/2005</b>	(Earliest) Priority Date (day/month/year) <b>06/02/2004</b>
Applicant  <b>KEMIRA PIGMENTS OY</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01G23/053 B01D53/86 C03C17/25 C03C17/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01G B01D B01J C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Y. LI, Y. FAN, Y. CHEN: "A NOVEL METHOD FOR PREPARATION OF NANOCRYSTALLINE RUTILE TiO <sub>2</sub> POWDERS BY LIQUID HYDROLYSIS OF TiCl <sub>4</sub> " J. MATER. CHEM., vol. 12, 2002, pages 1387-1390, XP002341998 cited in the application the whole document	1,9-12, 17,21
A	EP 0 376 216 A (ISHIHARA SANGYO KAISHA, LTD) 4 July 1990 (1990-07-04) page 6, line 20 - line 30; claim 2	1-13
A	US 6 001 326 A (KIM ET AL) 14 December 1999 (1999-12-14) cited in the application column 4, line 1 - column 7, line 15	1-13
-/--		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

24 August 2005

Date of mailing of the international search report

06/09/2005

Name and mailing address of the ISA

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Siebel, E

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 095 908 A (SUMITOMO CHEMICAL COMPANY, LIMITED) 2 May 2001 (2001-05-02) cited in the application paragraph '0037!; claims 5-8 -----	17,18, 21,22
A	EP 1 205 243 A (NEOMAT S.A) 15 May 2002 (2002-05-15) paragraph '0011! - paragraph '0014! -----	13
A	US 3 549 322 A (EDGAR KLEIN ET AL) 22 December 1970 (1970-12-22) column 2, line 2 - line 18; claim 1; example 1 -----	1-13
A	US 3 329 484 A (LONG RAY S ET AL) 4 July 1967 (1967-07-04) column 2, line 3 - column 3, line 21; claim 1 -----	1-13

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FI2005/000074

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0376216	A	04-07-1990	CA 2006729 A1	28-06-1990
			DE 68919665 D1	12-01-1995
			DE 68919665 T2	18-05-1995
			EP 0376216 A1	04-07-1990
			JP 1897558 C	23-01-1995
			JP 2306249 A	19-12-1990
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			US 5173386 A	22-12-1992
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			EP 1341609 A1	10-09-2003
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			FR 2002112 A5	03-10-1969
			GB 1254729 A	24-11-1971
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US 3329484	A	04-07-1967	NONE	

NATIONAL BOARD OF PATENTS  
AND REGISTRATION  
PATENTTI- JA REKISTERIHALLITUS  
Patentti- ja innovaatiolinja PATENTS AND INNOVATIONS

SEARCH REPORT  
TUTKIMUSRAPORTTI

PATENTTIHAKEMUS NRO PATENT APPLICATION NO. FI20040186	LUOKITUS CLASSIFICATION IPC7: C01G 23/47
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TUTKITTU AINEISTO MATERIAL SEARCHED COLLECTION OF PATENT PUBLICATIONS Patenttijulkaisukokoelma (FI, SE, NO, DK, DE, CH, EP, WO, GB, US), tutkitut luokat SEARCHED C01G	CLASSIFIED
Tiedonhaut ja muu aineisto INFORMATION RETRIEVALS AND OTHER MATERIAL WPI, EPODOC, PAJ	

VIITEJULKAISUT CITED REFERENCES		
Kategoria*) CATEGORY	Julkaisun tunnistetiedot IDENTIFICATION DATA OF THE PUBLICATION	Koskee vaatimuksia RELEVANT TO CLAIMS
X, Y	US 5024827 A (TIOXIDE GROUP, PLC), 18.6.1991	1-22
X, Y	US 4923682 A (KEMIRA INC), 8.5.1990, esim. vaatimukset	1-22
X, D	US 4944936 A (KEMIRA INC.), 31.7. 1990	1-22
X, Y	EP 1178011 A1 (SUMITOMO CHEMICAL COMPANY, LIMITED), 6.2. 2002, esim. vaatimukset	1-22
X, Y	KR 2002083652 A (AHAE CORP), 4.11.2002, tiivistelmä	1-22
X, Y	KR 2001025628 A (LEE. J. K.), 6.4.2001, tiivistelmä	1-22
X, Y	KR 2002078637 A (AHAE CORP), 19.10.2002, tiivistelmä	1-22
*) X Patentoitavuuden kannalta merkittävä julkaisu yksinään tarkasteltuna Y Patentoitavuuden kannalta merkittävä julkaisu, kun otetaan huomioon tämä ja yksi tai useampi samaan kategoriaan kuuluva julkaisu A Yleistä tekniikan tasoa edustava julkaisu, ei kuitenkaan patentoitavuuden este		
Päiväys DATE 8.11.2004	Tutkija EXAMINER M. Koskela	

8 NOV 2004

**PATENTTI- JA REKISTERIHALLITUS**

Patentti- ja innovaatiolinja

**TUTKIMUSRAPORTTI**

<b>PATENTTIHAKEMUS NRO</b>	<b>LUOKITUS</b>
FI20040186	IPC7: C01G 23/47

<b>TUTKITTU AINEISTO</b>
<b>Patenttijulkaisukokoelma (FI, SE, NO, DK, DE, CH, EP, WO, GB, US), tutkitut luokat</b> C01G
<b>Tiedonhaut ja muu aineisto</b> WPI, EPODOC, PAJ

<b>VIITEJULKAISUT</b>		
<b>Kategoria*)</b>	<b>Julkaisun tunnistetiedot</b>	<b>Koskee vaatimuksia</b>
X,Y	US 5024827 A (TIOXIDE GROUP, PLC), 18.6.1991	1-22
X,Y	US 4923682 A (KEMIRA INC), 8.5.1990, esim. vaatimukset	1-22
X,D	US 4944936 A (KEMIRA INC.), 31.7. 1990	1-22
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X,Y	KR 2002083652 A (AHAE CORP), 4.11.2002, tiivistelmä	1-22
X, Y	KR 2001025628 A (LEE. J. K.), 6.4.2001, tiivistelmä	1-22
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*) X Patentoitavuuden kannalta merkittävä julkaisu yksinään tarkasteltuna Y Patentoitavuuden kannalta merkittävä julkaisu, kun otetaan huomioon tämä ja yksi tai useampi samaan kategoriaan kuuluva julkaisu A Yleistä tekniikan tasoa edustava julkaisu, ei kuitenkaan patentoitavuuden este		
<b>Päiväys</b> 8.11.2004	<b>Tutkija</b> M. Koskela	